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## **DHEC Health Advisory**

Distributed via the South Carolina Health Alert Network

13 April 2006, 5:13 pm

### **Pediatric Death, Probable Group A Streptococcal Infection**

The South Carolina Department of Health and Environmental Control (DHEC) and the Richland County Medical Examiner's office are collaborating on an investigation of a pediatric death caused from a Group A streptococcal infection.

#### **Background**

On Wednesday, April 12, DHEC began receiving calls concerning reports of deaths of a number of Columbia-area children following short, acute febrile illnesses characterized by fever, vomiting and diarrhea. Investigations of these reports identified one school-age child who died on Sunday, April 9, following a brief course of vomiting and diarrhea, accompanied by leg pain and some bleeding from the mouth and nose. This child is also reported to have been ill for 3-4 days in the week prior to his death. Final autopsy results are pending; however, preliminary reports from the Richland County Coroner's office indicate death from overwhelming sepsis with probable Strep infection.

Of the ten or more classmates who were absent from school during the week prior to this child's death, only two are known to have had positive rapid strep tests. Several classmates of this child who have been seen in the past two days at a Columbia-area hospital have thus far been strep negative; although not all results are known at this time.

One close household contact of the child with a positive rapid strep test has been treated at a local hospital and has since been released.

A second report was received by DHEC of a Columbia-area infant who died Tuesday, April 11 following respiratory arrest. This infant had a history of previous hospitalization for respiratory distress and possible seizures.

These two cases appear to be unrelated by time, contacts, age group, geographic proximity, prior states of health and condition at time of death.

At this time, there is no evidence to suggest a broader exposure or illnesses associated with the pediatric death thought to be due to Group A Strep. However clinicians are asked to have a heightened index of suspicion for cases that present for care with symptoms consistent with Group A streptococcus infection.

#### **Clinical Information about Group A Strep**

Group A streptococcus (GAS, streptococcus pyogenes) can cause noninvasive disease (strep throat, cellulitis, impetigo) as well as invasive disease (necrotizing fasciitis [NF], streptococcal toxic shock syndrome [STSS], bacteremia, pneumonia). STSS is a severe illness characterized by shock and multiorgan failure. NF presents with severe local pain and destruction of tissue. Bacteremia may result in overwhelming sepsis.

The portal of entry into the bloodstream is unknown in about 50% of cases of invasive GAS disease, but in most cases it is thought to be via skin or mucous membranes. Few cases of invasive GAS disease are thought to follow pharyngitis.

Infection with GAS can result in a range of symptoms:

- No illness,
- Mild illness (strep throat or a skin infection such as impetigo),
- Severe illness (necrotizing fasciitis, streptococcal toxic shock syndrome).

## **Transmission and Recommendations for Treatment**

Transmission occurs person to person by contact with infectious secretions. While household contacts of patients with severe invasive GAS disease are at increased risk of developing severe invasive GAS disease as compared to the general population, the risk does not warrant routine testing or prophylaxis for all household contacts of patients with invasive GAS disease. Only those household contacts at greatest risk for invasive disease should receive prophylaxis. These individuals are: elderly, immunosuppressed, persons with chronic cardiac or respiratory disease, diabetes, skin lesions (i.e., children with varicella [chicken pox], intravenous drug users), African-Americans and American Indians.

The CDC recommends that health care providers routinely inform all household contacts of persons with invasive GAS disease about the clinical manifestations of pharyngeal and invasive GAS infection (e.g., fever, sore throat, and localized muscle pain) and emphasize the importance of seeking immediate medical attention if contacts develop such symptoms. Studies have suggested that a heightened index of suspicion for subsequent GAS disease should be maintained for 30 days after the diagnosis is made for the index patient.

## **Laboratory Testing for Group A Streptococcal infections**

Laboratory confirmation of GAS is recommended for children with pharyngitis, because accurate clinical differentiation of viral and GAS pharyngitis may not be possible. A specimen should be obtained by vigorous swabbing of the tonsils and posterior pharynx.

Several rapid diagnostic tests for GAS pharyngitis are available. As with throat cultures, the accuracy of these tests is highly dependent on the quality of the throat swab specimen which must contain pharyngeal and/or tonsillar secretions.

Therefore, when a patient suspected on clinical grounds of having GAS pharyngitis has a negative rapid streptococcal test, a throat culture should be obtained to ensure that the patient does not have a GAS infection.

## **Additional Sources for information**

- Centers for Disease Control and Prevention, General information about Group A Strep:
  - [www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_g.htm)
- Guidelines for infection control in hospital personnel:
  - <http://wonder.cdc.gov/wonder/prevguid/p0000446/P0000446.asp>
- Prevention of invasive group A streptococcal disease among household contacts of case patients and among postpartum and postsurgical patients: recommendations from the Centers for Disease Control and Prevention. Clinical Infectious Diseases, 2002 Oct 15;35(8):950-9.
- Red Book, American Academy of Pediatrics, 2003 Report on the Committee on Infectious Diseases, 26<sup>th</sup> edition, 573-584.

## DHEC Contact Information for Reportable Diseases and Reporting Requirements

Reporting of cases or possible cases of invasive Group A Strep is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2004 List of Reportable Conditions available at:

[http://www.scdhec.gov/health/disease/docs/reportable\\_conditions.pdf](http://www.scdhec.gov/health/disease/docs/reportable_conditions.pdf)

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

### Regional Public Health Offices

Mail or call reports to the Epidemiology Office in each Public Health Region.

#### Region 1

##### **(Anderson, Oconee)**

220 McGee Road  
Anderson, SC 29625  
Phone: (864) 231-1966  
Fax: (864) 260-5623  
Nights / Weekends: 1-866-298-4442

##### **(Abbeville, Edgefield, Greenwood, Laurens, McCormick, Saluda)**

1736 S. Main Street  
Greenwood, SC 29646  
Phone: 1-888-218-5475  
Fax: (864) 942-3690  
Nights / Weekends: 1-800-420-1915

#### Region 2

##### **(Greenville, Pickens)**

PO Box 2507  
200 University Ridge  
Greenville, SC 29602-2507  
Phone: (864) 282-4139  
Fax: (864) 282-4373  
Nights / Weekends: (864) 460-5355 or  
1-800-993-1186

##### **(Cherokee, Spartanburg, Union)**

PO Box 4217  
151 E. Wood Street  
Spartanburg, SC 29305-4217  
Phone: (864) 596-2227 ext. 210  
Fax: (864) 596-3443  
Nights / Weekends: (864) 809-3825

#### Region 3

##### **(Chester, Lancaster, York)**

PO Box 817  
1833 Pageland Highway  
Lancaster, SC 29721  
Phone: (803) 286-9948  
Fax: (803) 286-5418  
Nights / Weekends: 1-866-867-3886 or  
1-888-739-0748

##### **(Fairfield, Lexington, Newberry, Richland)**

2000 Hampton Street  
Columbia, SC 29204  
Phone: (803) 576-2749  
Fax: (803) 576-2993  
Nights / Weekends: (803) 304-4252

#### Region 4

##### **(Clarendon, Kershaw, Lee, Sumter)**

PO Box 1628  
105 North Magnolia Street  
Sumter, SC 29150  
Phone: (803) 773-5511  
Fax: (803) 773-6366  
Nights/Weekends: 1-877-831-4647

##### **(Chesterfield, Darlington, Dillon, Florence, Marlboro, Marion)**

145 E. Cheves Street  
Florence, SC 29506  
Phone: (843) 661-4830  
Fax: (843) 661-4859  
Nights / Weekends: (843) 660-8145

#### Region 5

##### **(Bamberg, Calhoun, Orangeburg)**

PO Box 1126  
1550 Carolina Avenue  
Orangeburg, SC 29116  
Phone: (803) 533-7199  
Fax: (803) 536-9118  
Nights / Weekends: (803) 954-8513

#### Region 5 (cont)

##### **(Aiken, Allendale, Barnwell)**

1680 Richland Avenue, W. Suite 40  
Aiken, SC 29801  
Phone: (803) 642-1618  
Fax: (803) 643-8386  
Nights / Weekends: (803) 827-8668 or  
1-800-614-1519

#### Region 6

##### **(Georgetown, Horry, Williamsburg)**

2830 Oak Street  
Conway, SC 29526-4560  
Phone: (843) 365-3126  
Fax: (843) 365-3153  
Nights / Weekends: (843) 381-6710

#### Region 7

##### **(Berkeley, Charleston, Dorchester)**

4050 Bridge View Drive, Suite 600  
N. Charleston, SC 29405  
Phone: (843) 746-3806  
Fax: (843) 746-3851  
Nights / Weekends: (843) 219-8470

#### Region 8

##### **(Beaufort, Colleton, Hampton, Jasper)**

219 S. Lemacks Street  
Walterboro, SC 29488  
Phone: (843) 525-7603  
Fax: (843) 549-6845  
Nights / Weekends: 1-800-614-4698

#### Bureau of Disease Control

##### **Acute Disease Epidemiology Division**

1751 Calhoun Street  
Box 101106  
Columbia, SC  
Phone: (803) 898-0861  
Fax: (803) 898-0897  
Nights / Weekends: 1-888-847-0902

Categories of Health Alert messages:

**Health Alert** conveys the highest level of importance; warrants immediate action or attention.

**Health Advisory** provides important information for a specific incident or situation; may not require immediate action.

**Health Update** provides updated information regarding an incident or situation; unlikely to require immediate action.